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                 has been enhanced and reloaded
                 CHEMLIST enhanced with new search and display field
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         OCT 30
                 JAPIO enhanced with IPC 8 features and functionality
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         NOV 03
                 CA/CAplus F-Term thesaurus enhanced
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         NOV 10
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         NOV 20
                 CA/CAplus to MARPAT accession number crossover limit increased
                 to 50,000
         DEC 01
                 CAS REGISTRY updated with new ambiguity codes
NEWS
      9
                 CAS REGISTRY chemical nomenclature enhanced
NEWS 10
         DEC 11
NEWS 11
         DEC 14
                 WPIDS/WPINDEX/WPIX manual codes updated
NEWS 12
         DEC 14
                 GBFULL and FRFULL enhanced with IPC 8 features and
                 functionality
         DEC 18
                 CA/CAplus pre-1967 chemical substance index entries enhanced
NEWS 13
                 with preparation role
         DEC 18
NEWS 14
                 CA/CAplus patent kind codes updated
NEWS 15
         DEC 18
                 MARPAT to CA/CAplus accession number crossover limit increased
                 to 50,000
         DEC 18
NEWS 16
                 MEDLINE updated in preparation for 2007 reload
         DEC 27
                 CA/CAplus enhanced with more pre-1907 records
NEWS 17
                 CHEMLIST enhanced with New Zealand Inventory of Chemicals
NEWS 18
         JAN 08
NEWS 19
         JAN 16
                 CA/CAplus Company Name Thesaurus enhanced and reloaded
                 IPC version 2007.01 thesaurus available on STN
NEWS 20
        JAN 16
NEWS 21
        JAN 16
                 WPIDS/WPINDEX/WPIX enhanced with IPC 8 reclassification data
NEWS 22
         JAN 22
                 CA/CAplus updated with revised CAS roles
NEWS 23
         JAN 22
                 CA/CAplus enhanced with patent applications from India
NEWS 24
         JAN 29
                 PHAR reloaded with new search and display fields
NEWS 25
        JAN 29
                 CAS Registry Number crossover limit increased to 300,000 in
                 multiple databases
NEWS 26
        FEB 13
                 CASREACT coverage to be extended
                 PATDPASPC enhanced with Drug Approval numbers
NEWS 27
        Feb 15
NEWS 28
        Feb 15
                 RUSSIAPAT enhanced with pre-1994 records
NEWS 29
        Feb 23
                 KOREAPAT enhanced with IPC 8 features and functionality
NEWS 30 Feb 26
                 MEDLINE reloaded with enhancements
                 EMBASE enhanced with Clinical Trial Number field
NEWS 31
        Feb 26
NEWS 32
         Feb 26
                 TOXCENTER enhanced with reloaded MEDLINE
NEWS 33
         Feb 26
                 IFICDB/IFIPAT/IFIUDB reloaded with enhancements
NEWS 34
         Feb 26
                 CAS Registry Number crossover limit increased from 10,000
                 to 300,000 in multiple databases
NEWS EXPRESS
              NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT
```

MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),

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AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.

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FILE 'CAPLUS' ENTERED AT 12:16:03 ON 05 MAR 2007 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

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=> d

Li AMSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:1078327 CAPLUS
DN 143:349519
TI Reverse Kleiner method for manufacturing nitrogen dioxide, nitric oxide, nitric acid, metallic ascorbates and alkyl ascorbates of vitamin C

IN Kleiner, Bela
RA USA
SO U.S. Pat. Appl. Publ., 15 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CKT 1
PATENT NO. KIND DATE APPLICATION NO. DATE

PTI US 2005222438 Al 20051006 US 2004-814916 20040330

C-PRAI US 2004-814916 20040330

=> select l1 ENTER ANSWER NUMBER OR RANGE (1-):1 ENTER DISPLAY CODE (TI) OR ?:rn E1 THROUGH E7 ASSIGNED

=> fil caplus COST IN U.S. DOLLARS

SINCE FILE TOTAL SESSION ENTRY 3.74

4.58

FULL ESTIMATED COST

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=> s e1-e7

98195 10102-43-9/BI 30387 10102-44-0/BI 2461 134-03-2/BI 82423 50-81-7/BI 839 6381-77-7/BI 55098 7697-37-2/BI 1905 89-65-6/BI

252653 (10102-43-9/BI OR 10102-44-0/BI OR 134-03-2/BI OR 50-81-7/BI OR 6381-77-7/BI OR 7697-37-2/BI OR 89-65-6/BI)

=> d scan 12

252653 ANSWERS CAPILIS COPYRIGHT 2007 ACS on STN
49-3 (Industrial Inorganic Chemicals)
Method for purification of nitrogen oxide and apparatus for purification of nitrogen oxide
nitrogen oxide purifn absorption liquefaction concn vessel
Absorption
Concentration (process)
tiquefaction
(absorption and liquefaction process for purification of nitrogen
te) (absorption and liqueraction process for purification of nitrogen oxide)

IT Purification (apparatus; absorption and liquefaction process for purification of nitrogen oxide)

IT 10024-97-2P, Nitrogen oxide (N20) 10102-43-9P, Nitrogen oxide (N0) 10102-44-0P, Nitrogen oxide (N02)

RL: PUR (Purification or recovery); PREP (Preparation) (absorption and liquefaction process for purification of nitrogen oxide)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

```
=> s 134-03-2/rn

2461 134-03-2

16 134-03-2D

L3 2448 134-03-2/RN

(134-03-2 (NOTL) 134-03-2D)
```

=> d

ANSWER 1 OF 2448 CAPLUS COPYRIGHT 2007 ACS on STN 2007:203200 CAPLUS Nontoxic potentiation sensitization of ovarian cancer therapy by supplementary treatment with vitamins Gilloteaux, Jacques; Taper, Henryk S.; Jamison, James M.; Summers, Jack Summa Health System, USA
U.S. Pat. Appl. Publ., 21pp., Cont.-in-part of U.S. Ser. No. 160,152.
CODEN: USXXCO
Patent
English
CNT 2 IN L. PA SO

FAN.	FAN.CNT 2										
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE						
PI	US 2007043110	A1	20070222	US 2006-464295	20060814						
	US 2003073738	A1	20030417	US 2002-160152	20020603						
	US 7091241	B2	20060815								
PRAI	US 2001-295025P	P	20010601								
	US 2002-160152	A2	20020603								

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=> fil reg
COST IN U.S. DOLLARS
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FULL ESTIMATED COST

SINCE FILE TOTAL ENTRY SESSION 20.21 24.79

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REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

=> d his

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FILE 'CAPLUS' ENTERED AT 12:16:03 ON 05 MAR 2007 L1 1 S US20050222438/PN SELECT L1 1 RN

FILE 'CAPLUS' ENTERED AT 12:16:28 ON 05 MAR 2007 252653 S E1-E7 2448 S 134-03-2/RN

FILE 'REGISTRY' ENTERED AT 12:17:43 ON 05 MAR 2007

=> s e1-e7

L2 L3

> 1 10102-43-9/BI (10102-43-9/RN) 1 10102-44-0/BI (10102-44-0/RN) 1 134-03-2/BI (134-03-2/RN) 1 50-81-7/BI (50-81-7/RN) 1 6381-77-7/BI (6381-77-7/RN) 1 7697-37-2/BI (7697-37-2/RN) 1 89-65-6/BI

> > (89-65-6/RN)

L4 7 (10102-43-9/BI OR 10102-44-0/BI OR 134-03-2/BI OR 50-81-7/BI OR

=> d 14 1-7

```
L4 ANSWER 1 OF 7 REGISTRY COPYRIGHT 2007 ACS ON STN NN 10102-44-0 REGISTRY ED ENTERGISTRY 16 MOV 1984 CN Nitrogen oxide (NO2) (8CI, 9CI) (CA INDEX NAME) OTHER NAMES:
              Nitrite radical
Nitrito
              Nitrogen dioxide
Nitrogen dioxide (NO2)
Nitrogen peroxide
127999-62-6, 56003-83-9, 119990-11-3, 66252-28-6, 78246-05-6, 50443-93-1
               N 02
                    TN Files: AGRICOLA, ANABSTR, AQUIRE, BIOSIS, BIOTECHNO, CA, CABA, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE,
CIN
             CSCHEM, CSNB, DDFU, DETHERM*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, PIRA, PROMT, RTECS*, TOXCENTER, ULIDAT, USPAT2, USPATFULL, VTB

(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)
```

0- N==0

**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT **

30348 REFERENCES IN FILE CA (1907 TO DATE)
69 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
30387 REFERENCES IN FILE CAPLUS (1907 TO DATE)

```
L4 ANSWER 3 OF 7 REGISTRY COPYRIGHT 2007 ACS on STN RN 7697-37-2 REGISTRY
ED Entered STN: 16 Nov 1984
CN Nitric acid (CA INDEX NAME)
OTHER NAMES:
CN Aqua fortis
CN Azotic acid
CN Fumic acid
CN Hydrogen nitrate
CN Nitril
CN Nitric acid (HONO2)
CN Nitryl Nydroxide
CN NSC 147791
CN NSC 15203
DR 802862-
MF H M
                                                                   H N O3
COM
STN Files:
                                                                              ON
IN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BIOSIS, BIOTECHNO, CA, CABA, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORREX, CHEMILST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU, DETHERN', DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPATZ, GMELIN', HSDB', IFICDB, IFIPAT, IFIUDB, IPA, HEDLINE, MRCK', MSDS-OHS, PIRA, PROMT, PS, RTECS', TOXCENTER, TULSA, ULIDAT, USAN, USPATZ, USPATFULL, VETU, VTB ("File contains numerically searchable property data) ther Sources: DSL'*, EINECS'*, TSCA'*

(**Enter CHEMLIST File for up-to-date regulatory information)
                                                                    Other
```

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

54788 REFERENCES IN FILE CA (1907 TO DATE) 2222 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA 55098 REFERENCES IN FILE CAPLUS (1907 TO DATE) 6 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

```
L4 ANSWER 2 OF 7 REGISTRY COPYRIGHT 2007 ACS ON STN N 10102-43-9 REGISTRY ED Entered STN: 16 Nov 1984 CN Nitrogen oxide (NO) (8CI, 9CI) (CA INDEX NAME) OTHER NAMES:
Amidogen, oxo-
INOmax
           Nitric oxide
Nitric oxide (NO)
Nitric oxide trimer
          Nitrie oxide trimer
Nitrogen monoxide
Nitrogen monoxide
Nitrogen oxide (Nd0)
Nitrogen(II) oxide
Nitrosyl radical
OHM 1171
53851-19-7, 51005-20-0, 51005-21-1, 90452-29-2
N O
COM
           STN Files:
               TN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOSIS, BIOTECHNO, CA, CABA,
CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE,
CIN.
               CSCHEM, CSNB, DDFU, DETHERM*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HSDB*, IFICDB, IFIPAT, IFIUDB, IMSPATENTS, IMSRESEARCH, IPA, MEDLINE, MRCK*, MSDS-OHS, PATDPASPC,
PIRA,
               PROMT. RTECS*. SPECINFO. TOXCENTER. ULIDAT. USPAT?. USPATFULL, VETU,
VTB
                    (*File contains numerically searchable property data)
er Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)
           Other
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N=0

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

97972 REFERENCES IN FILE CA (1907 TO DATE)
552 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
98195 REFERENCES IN FILE CAPLUS (1907 TO DATE)

```
L4 ANSWER 4 OF 7 REGISTRY COPYRIGHT 2007 ACS ON STN
RN 6381-77-7 REGISTRY
ED Entered STN: 16 Nov 1984
CN D-erythro-Hex-2-enonic acid, y-lactone, monosodium salt (8CI, 9CI)
(CA INDEX NAME)
OTHER CA INDEX NAMES:
  CN Araboascorbic acid, monosodium salt, D- (6CI) OTHER NAMES:
               Eribate N
               Erythorbic acid sodium salt
Isona
              Mercate 20
               Neo-Cebitate
Ozoban
               Sodium D-isoascorbate
              Sodium erythorbate
Sodium isoascorbate
Sodium Isovitamin C
STEREOSEARCH
               8003-96-1
C6 H8 O6 . Na
MF C6 H8 O6 Na
C1 COM
C2 COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CAOLD,
CAPLUS, CASREACT, CANB, CHEMCATS, CHEMINFORMEX, CHEMLIST, CIN, CSCHEM,
EMBASE, HSDB*, IFICOB, IFIPAT, IFIUDB, IPA, MSDS-OHS, PIRA, PROMT,
RTECS*, TOXCENTER, USPATPULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)
CRN (89-65-6)
```

Absolute stereochemistry

**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT **

837 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
839 REFERENCES IN FILE CAPLUS (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (PRIOR TO 1967)

```
L4 ANSWER 5 OF 7 REGISTRY COPYRIGHT 2007 ACS on STN
RN 134-03-2 REGISTRY
ED Entered STN: 16 Nov 1984
CN L-Ascorbic acid, monosodium salt (8CI, 9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Ascorbic acid, sodium deriv. (6CI, 7CI)
OTHER NAMES:
CN 3-0xo-L-gulofuranolactone sodium
CN Ascorbic acid sodium salt
CN Ascorbic
CN Cebitate
CN Cebitate
CN Cebitate
CN CR 40
CN CK 40
CN E 301 [antioxidant]
CN HBL 508
CN Iskia C
CN L-Ascorbic acid sodium salt
CN Limcee
CN Monosodium ascorbate
CN Monosodium L-ascorbate
CN Monosodium L-ascorbate
CN Natri-C
CN Sodsscorbate
CN Sodium ascorbate
CN Sodium ascorbate
CN Vitamin C Na salt
CN Vitamin C Na salt
CN Vitamin C Sodium
FS STEREOSEARCH
CS HB 66 Na
CC COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOSIS, BIOTECHNO,
CA, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMEX, CHEMIST,
CIN, CSCHEM, DDFU, DRUGU, EMBASE, HSDB*, IFICAB, IFIPAT, IFIUDB,
INSCOSEARCH, IPA, MRCK*, MSDS-OMS, PIRA, PROMT, PS, RFECS*, TOXCENTER,
USAN, USPATZ, USPATFULL
("File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**, WHO
(""Enter CHEMLIST File for up-to-date regulatory information)
CRN (50-81-7)
Absolute stereochemistry.
```

OH OH

● Na

```
L4 ANSWER 6 OF 7 REGISTRY COPYRIGHT 2007 ACS on STN
RN 89-65-6 REGISTRY
ED Entered STN: 16 Nov 1984
CD Entered STN: 16 Nov 1984
CD CTHER CA INDEX NAMES:
CN D-erythro-Hear-2-enonic acid, y-lactone (8CI, 9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN D-erythro-Hexonic acid, 3-keto-, y-lactone (6CI)
CN Erythorbic acid (7CI)
OTHER NAMES:
CN Araboascorbic acid
CN Araboascorbic acid
CN D-atabino-Ascorbic acid
CN D-atabino-Ascorbic acid
CN D-atabino-Ascorbic acid
CN D-tythorbic acid
CN D-tythorbic acid
CN D-tythorbic acid
CN D-tythorbic acid
CN Eycorbin
CN Glucoascorbic acid
CN Eycorbin
CN Glucoascorbic acid
CN Isositamin C
CN Mercate 5
Neo-Cebicure
CN NSC 8117
N Saccharosonic acid
FS STEREOSEARCH
SYBROSEARCH
SYBROSEARCH
SYBROSEARCH
SYBROSEARCH
COMBER AGRICOLA, ANABSTR, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CBAD, CADOLD, CAPULUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMEX, CHEMIST, CIN, CSCHEM, DDFU, DRUGU, EMBASE, GMELIN*, HSDB*, IFICOB, IFIPAT, IFIUDB, IFIPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, PIRA, PROMT, RTECS*,
SPECINFO,
TOXCENTER, TULSA, USPATZ, USPATFULL,
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**

(*Enter CHEMLIST File for up-to-date regulatory information)
```

Absolute stereochemistry.

**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT **

```
1900 REFERENCES IN FILE CA (1907 TO DATE)
119 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1905 REFERENCES IN FILE CAPLUS (1907 TO DATE)
30 REFERENCES IN FILE CAPLUS (PRIOR TO 1967)
```

L4 ANSWER 7 OF 7 REGISTRY COPYRIGHT 2007 ACS on STN
RN 50-81-7 REGISTRY
ED Entered STN: 16 Nov 1984
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
(N (+)-Ascorbic acid
CN 100M
CN 3-6xet-L-Gulefuranolactone
CN 3-0xe-L-qulofuranolactone
CN 3-0xe-L-qulofuranolactone
CN Allercorb
CN Antiscorbutic vitamin
CN Antiscorbutic vitamin
CN Ascorbic acid
CN Ascorbic acid
CN Ascorbic Acid
CN Ascorbic Acid
CN Ascorbic CN Ascorbic
CN Ascorbic
CN Ascorbic
CN Ascorbic
CN Ascorbic
CN Ascorbic
CN Ascorbic
CN C-16/PW
CN C-Quin
CN C-Uimin
CN C-Vimin
CN C-Vimin
CN C-Vimin
CN Cantaxin
CN Cantaxin
CN Cataxin
CN Cactil
CN Ce-Wi-Lin
CN Ce-Wi-Lin
CN Ce-Vi-Sol
CN Cebion
CN Cebion
CN Cebion
CN Cepion
CN Cepion
CN Cesil
CN Cestame
CN Cescorb
CN Cestame
CN Cecvatin
CN Cevatin
CN Cevital
ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for DISPLAY
FS STEREOSEARCH
CN 88481-69-5, 885512-24-3, 623158-95-2, 56533-05-2, 57304-74-2, 57606-40-3,
56172-55-5, 129940-97-2, 14536-17-5, 50976-75-5, 154170-90-8, 89924-65 5-172-55-5. 129940-97-2. 14536-17-5. 50976-75-5. 154170-90-8. 89924-69-6.

L4 ANSWER 5 OF 7 REGISTRY COPYRIGHT 2007 ACS on STN

2456 REFERENCES IN FILE CA (1907 TO DATE)
16 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2461 REFERENCES IN FILE CAPUS (1907 TO DATE)
17 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

(Continued)

ANSWER 7 OF 7 REGISTRY COPYRIGHT 2007 ACS on STN (Continued)
30208-61-8, 259133-78-3
C6 H8 06
COM
STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOSIS,
BIOTECHNO, CA, CABA, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS,
CHEMINFORMENX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DRUGU,
EMBASE, ENCOMPLIT, ENCOMPLITZ, ENCOMPAT, ENCOMPPATZ, GRELIN*, HSDB*,
IFICDB, IFIPAT, IFIUDB, IMSCOSEARCH, IPA, MEDLINE, RRCK*, MSDS-0HS,
IFICDB, IFIPAT, IFIUDB, IMSCOSEARCH, IPA, MEDLINE, RRCK*, MSDS-0HS,
NAPRALERT, PHAR, PIRA, PROHT, PS, RTECS*, SPECINFO, SYNTHLINE,
TOXCENTER, TULSA, ULIDAT, USRN, USPATZ, USPATFULL, VETU, VTB
("File contains numerically searchable property data)
Other Sources: DSL*, EINECS*, TSCA*, WHO

("*Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

82247 REFERENCES IN FILE CA (1907 TO DATE) 1828 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA 82423 REFERENCES IN FILE CAPLUS (1907 TO DATE) 12 REFERENCES IN FILE CACLD (PRIOR TO 1967)

=> fil caplus
COST IN U.S. DOLLARS

FULL ESTIMATED COST

SINCE FILE TOTAL ENTRY SESSION 15.00 39.79

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=> s 50-81-7/rn

82423 50-81-7

1832 50-81-7D

L5 81335 50-81-7/RN

(50-81-7 (NOTL) 50-81-7D)

=> s 15 and calcium

804880 CALCIUM

36 CALCIUMS

804883 CALCIUM

(CALCIUM OR CALCIUMS)

L6 6231 L5 AND CALCIUM

=> s 16 and calcium ascorbate

804880 CALCIUM

36 CALCIUMS

804883 CALCIUM

(CALCIUM OR CALCIUMS)

35135 ASCORBATE

625 ASCORBATES

35354 ASCORBATE

(ASCORBATE OR ASCORBATES)

409 CALCIUM ASCORBATE

(CALCIUM (W) ASCORBATE)

L7 234 L6 AND CALCIUM ASCORBATE

=> s 17 and nitrogen dioxide

642352 NITROGEN

3873 NITROGENS

645074 NITROGEN

(NITROGEN OR NITROGENS)

485654 DIOXIDE 6710 DIOXIDES 487352 DIOXIDE (DIOXIDE OR DIOXIDES) 23314 NITROGEN DIOXIDE (NITROGEN(W)DIOXIDE) L8 0 L7 AND NITROGEN DIOXIDE => s 17 and nitric oxide 183587 NITRIC 3 NITRICS 183590 NITRIC (NITRIC OR NITRICS) 1735541 OXIDE 353041 OXIDES 1835361 OXIDE (OXIDE OR OXIDES) 110370 NITRIC OXIDE (NITRIC(W)OXIDE) L9 0 L7 AND NITRIC OXIDE => s 17 and ascorbic acid 84230 ASCORBIC 4322646 ACID 1571174 ACIDS 4824578 ACID (ACID OR ACIDS) 83530 ASCORBIC ACID (ASCORBIC (W) ACID) L10 181 L7 AND ASCORBIC ACID

=> d 110 1-10

```
L10 ANSWER 1 OF 181 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2007:15009 CAPLUS
D146:107684
TI Novel propofol compositions comprising ascorbic acid or its salts
IN Dixit, Suresh; Goyal, Sandhya; Okech, Frederick; Shek, Efraim
PA Tarco Pharmaceuticals U.S.A., Inc., USA
SO PCT Int. Appl., 38pp.
CODEN: PIXXD2
DT Patent
LA English
FRAN.CHT 1
PATENT NO. KIND DATE APPLICATION NO. DATE

PI W0 2007000662 A2 20070104 W0 2006-181898 20060201
W' AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
CR, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GH, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, NX, KP, KR,
KZ, LC, LK, LR, LS, LT, LU, LV, LV, MA, MD, MG, MK, MM, MW, MK,
MZ, NA, NG, NI, NO, NZ, CM, PG, PR, PL, PT, RO, RU, SC, SD, SE,
SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
VN, YU, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
CF, CG, CI, CM, GA, GM, GQ, GM, ML, MR, NE, SN, TD, TG, BM, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM
PRAI US 2005-649777P P 20050203
```

```
L10 ANSWER 3 OF 181 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2006:1348204 CAPLUS
DN 146:128468
T1 Application of paramagnetic Mn heteropoly coordination compound in contrast medium of magnetic resonance imaging
IN Pei, Fengkui; Li, Zhongfeng; Li, Xiaojing; Li, Weisheng
PA Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Peop. Rep. China
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 15pp.
CODEN: CNUXEV
DT Patent
LA Chinese
FAN.CNT 1
PATENT NO. KIND DATE APPLICATION NO. DATE
PI CN 1879896 A 20061220 CN 2006-10016823 20060429
PRAI CN 2006-10016823 20060429
```

L10	ANSWER 4 OF 181 C	APLUS (COPYRIGHT 20	007 ACS on STN							
AN	2006:1309962 CAPI	JUS									
DN	146:44567										
TI	Universal protein	formula	tion meeting	multiple dietary needs	for optimal						
	health and enhanci	ng the	numan immune	system.							
IN	Robertson, Marion G.										
PA	USA										
SO	U.S. Pat. Appl. Pu	bl., 29	p.								
	CODEN: USXXCO										
DT	Patent										
LA	English										
FAN.	CNT 1										
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE						
PI	US 2006280840	A1	20061214	US 2005-135895	20050524						
PRAI	US 2005-135895		20050524								

```
L10 ANSWER 6 OF 181 CAPLUS COPYRIGHT 2007 ACS ON STN
AN 2006:1094123 CAPLUS
DN 145:426010
TI NUTTIENT COMPOSITION for treating Sarcoma and prostate cancer
IN Rath, Matthias; Roomi, M. Waheed; Ivanov, Vadim; Niedzwiecki, Aleksandra
PA Neth.
SO PCT Int. Appl., 26pp.
CODEN: PIXXD2
TO PATENT
LA English
FAN.CHT 1
PATENT NO. KIND DATE APPLICATION NO. DATE

PI NO 2006108429 A1 20061019 WO 2005-EP3766 20050411
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GH, HR, HU, ID, IL, IN, IS, JP, KE, KG, MM, KP, KR, KZ,
LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, NM, MW, MX, MZ, NA,
NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL,
SM, SY, TJ, TM, TN, TT, TT, TU, AU, GU, US, UZ, VC, VN, YU, ZA,
ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF,
CG, CI, CM, GA, GM, ML, HR, NE, SN, TD, TG, BW, GM, GM,
KZ, MD, RU, TJ, TM

PRAI WO 2005-EP3766
20050411

PRAI WO 2005-EP3766
20050411

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT
```

```
L10 ANSWER 7 OF 181 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2006:1050240 CAPLUS
DN 145:383419
TI Method for preparation of antioxidant capsule with efficacy doubled by impregnating antioxidant into a microcapsule, antioxidant capsule
by this method and goods using antioxidant capsule
IN Lee, Jae Sik
PA S. Korea
SO Repub. Korean Kongkae Taeho Kongbo, No pp. given
COODE: KRXXA7
DT Fatent
LA Korean
FAN.CHT 1
PATENT NO. KIND DATE APPLICATION NO. DATE
PI KR 2006003777 A 20060111 KR 2004-52816 20040707
PRAI KR 2004-52816 20040707
```

L10	ANSWER 8 OF 181	CAPLUS	COPYRIGHT 20	07 ACS on STN						
AN	2006:912541 CAPLE	JS								
DN	145:263351									
TI	Tocopherols, ascor		d, riboflavi	ns, and CoQ10 for						
IN	Torisumi, Yasuhiro									
PA	Daiichi Sankyo Hea	lthcare	Co., Ltd.,	Japan						
so	Jpn. Kokai Tokkyo CODEN: JKXXAF	Koho, 1	3pp.							
DT	Patent									
LA	Japanese									
FAN.	CNT 1									
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE					
PΙ	JP 2006232815	A	20060907	JP 2006-14687	20060124					
	JP 2005-16383	A	20050125							

```
L10 ANSWER 9 OF 181 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2006:795605 CAPLUS
DN 145:209681
TI Spray-dried compositions and their uses
IN Subramaniam, Anandaraman
PA Firmenich SA, Switz.
SO PCT Int. Appl., 27pp.
CODEN: PIXXD2
DT PATENT
LA English
FAN.CHT 1
PATENT NO. KIND DATE APPLICATION NO. DATE
PATENT NO. KIND DATE APPLICATION NO. DATE
PATENT NO. KIND DATE APPLICATION NO. DATE
PATENT NO. CO, CA, CU, C2, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, CH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR,
KZ, LC, LK, LR, LS, LT, LU, LV, LV, MA, MD, MG, MM, MN, MW, MX,
MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE,
VN, YU, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BE, BJ,
CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG, BW, GH,
KG, KZ, MD, RU, TJ, TM

PRAI US 2005-650181P
P 20050203
RE.CNT 3
THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT
```

L10	ANSWER 10 OF 181	CAPLUS	COPYRIGHT 2	2007 ACS on STN	
AN	2006:763023 CAPL	US			
DN	145:174380				
TI	Oral compositions acid for two-time	s daily	administrati	.on	
IN	Okada, Minoru; On	uki, Yoi	chi; Kurasum	i, Toshiaki; Otaki, Tak	ashi
PA	S. S. Pharmaceuti	cal Co.,	Ltd., Japan	1	
so	Jpn. Kokai Tokkyo CODEN: JKXXAF	Koho, 9	pp.		
DT	Patent				
LA	Japanese				
FAN.	CNT 1				
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2006199640	A	20060803	JP 2005-14103	20050121
	KR 2006085173	A	20060726	KR 2006-2745	20060110
	CN 1839826	A	20061004	CN 2006-10001647	20060120
PRAI	JP 2005-14103	A	20050121		

```
=> d his
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(FILE 'HOME' ENTERED AT 12:13:27 ON 05 MAR 2007)

FILE 'CAPLUS' ENTERED AT 12:16:03 ON 05 MAR 2007 L1 1 S US20050222438/PN SELECT L1 1 RN

FILE 'CAPLUS' ENTERED AT 12:16:28 ON 05 MAR 2007

L2 252653 S E1-E7

L3 2448 S 134-03-2/RN

FILE 'REGISTRY' ENTERED AT 12:17:43 ON 05 MAR 2007
7 S E1-E7

FILE 'CAPLUS' ENTERED AT 12:19:16 ON 05 MAR 2007

L5 81335 S 50-81-7/RN

L6 6231 S L5 AND CALCIUM

L7 234 S L6 AND CALCIUM ASCORBATE

L8 0 S L7 AND NITROGEN DIOXIDE L9 0 S L7 AND NITRIC OXIDE

L10 181 S L7 AND ASCORBIC ACID

=> fil reg

L4

COST IN U.S. DOLLARS SINCE FILE TOTAL ENTRY SESSION

35.32

75.11

FULL ESTIMATED COST

FILE 'REGISTRY' ENTERED AT 12:21:11 ON 05 MAR 2007 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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STRUCTURE FILE UPDATES: 4 MAR 2007 HIGHEST RN 924728-01-8 DICTIONARY FILE UPDATES: 4 MAR 2007 HIGHEST RN 924728-01-8

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TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

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http://www.cas.org/ONLINE/UG/regprops.html

```
-> s 50-81-7
L11 1 50-81-7
(50-81-7/RN)
```

 => fil caplus
COST IN U.S. DOLLARS

FULL ESTIMATED COST

SINCE FILE TOTAL ENTRY SESSION 0.45 75.56

FILE 'CAPLUS' ENTERED AT 12:21:30 ON 05 MAR 2007
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=> fil reg

COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 0.47 76.03

FULL ESTIMATED COST

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STRUCTURE FILE UPDATES: 4 MAR 2007 HIGHEST RN 924728-01-8 DICTIONARY FILE UPDATES: 4 MAR 2007 HIGHEST RN 924728-01-8

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

=> s calcium ascorbate 93449 CALCIUM

710 ASCORBATE

L13 2 CALCIUM ASCORBATE

(CALCIUM(W) ASCORBATE)

=> d 113 1-2

```
L13 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2007 ACS on STN
RN 5743-28-2 REGISTRY
ED Entered STN: 16 Nov 1984
CN L-Ascorbic acid, calcium salt (2:1), dihydrate (8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN Calcium ascorbate dihydrate
CN Calcium L-ascorbate dihydrate
FS STEREOSEARCH
DR 6381-95-9
F C6 H8 O6 . 1/2 Ca . H2 O
LC STN Files: BIOSIS, CA, CAPLUS, CHEMCATS, CHEMLIST, CSCHEM, IFICDB, IFIPAT, IFIUDB, TOXCENTER, USAN, USPAT2, USPATFULL
CRN (50-81-7)
```

Absolute stereochemistry.

●1/2 Ca

● н20

12 REFERENCES IN FILE CA (1907 TO DATE)
12 REFERENCES IN FILE CAPLUS (1907 TO DATE)

```
L13 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2007 ACS on STN
RN 5743-27-1 REGISTRY
ED Entered STN: 16 Nov 1984
CN L-Ascorbic acid, calcium salt (2:1) (8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN As-Cal
CN Ascalan
CN Ascorbic acid calcium salt
CN Ascorbic acid calcium salt
CN Ascorbic acid calcium salt
CN Calcia-C
CN Calcia-C
CN Calcia-C
CN Calcia-C
CN Calcia-C
CN Calcium ascorbate
CN Calcium ascorbate
CN Calcium ascorbate
CN Erivit C
CN Hemicalcium ascorbate
CN Hemicalcium salt
ES STEREOSEARCH
CN S653-51-9
RF C6 H8 06 1/2 Ca
CI COM
CASREACT, CBNB, CHEMCATS, CHEMLIST, CIN, CSCHEM, EMBASE, HSDB*, IFICDB, IFIFAT, IFIUDB, IFA, MRCK*, PROMT, PS, TOXCHMICH, USSAN, USPAT2,
USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)
CRN (50-81-7)
```

Absolute stereochemistry.

●1/2 Ca

**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT **

416 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
16 REFERENCES IN FILE CAPUS (1907 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> s calcium isoascorbate

93449 CALCIUM

7 ISOASCORBATE

L14

1 CALCIUM ISOASCORBATE

(CALCIUM(W) ISOASCORBATE)

=> d 114

```
L14 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2007 ACS ON STN
RN 99552-34-8 REGISTRY
ED Entered STN: 21 Dec 1985
CD Pertythro-Hex-2-enonic acid, y-lactone, calcium salt (9CI) (CA INDEX NAME:
CN CAlcium isosacorbate
FS STREDOSEARCH
MF C6 H8 06 . x Ca
LC STN Files: BEILSTEIN*, CA, CAPLUS, CHEMLIST, TOXCENTER, USPAT2,
USPATFULL
(*File contains numerically searchable property data)
CRN (89-65-6)
```

Absolute stereochemistry.

●ж Са

4 REFERENCES IN FILE CA (1907 TO DATE) 4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

```
93449 CALCIUM
          4141 ASCORBIC
       8108729 ACID
          8158 ACIDS
       8114634 ACID
                  (ACID OR ACIDS)
             O CALCIUM ASCORBIC ACID
L15
                  (CALCIUM(W) ASCORBIC(W) ACID)
=> s calcium isoascorbic acid
         93449 CALCIUM
            13 ISOASCORBIC
       8108729 ACID
          8158 ACIDS
       8114634 ACID
                  (ACID OR ACIDS)
             1 CALCIUM ISOASCORBIC ACID
L16
                  (CALCIUM(W) ISOASCORBIC(W) ACID)
```

=> s calcium ascorbic acid

=> d l16

```
L16 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2007 ACS ON STN
RN 41236-00-4 REGISTRY
ED Entered STN: 16 Nov 1984
CD D-erythro-Hex-Z-enonic acid, y-lactone, 3-(dihydrogen phosphate),
calcium salt (1:1) (GCI) (CA INDEX NAME)
OTHER NAMES:
CN Monocalcium isoascorbic acid-3-phosphate
SS STEROSEARCH
MF C6 H9 O9 P. Ca
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL
CRN (737700-26-4)
```

Absolute stereochemistry.

● Ca

1 REFERENCES IN FILE CA (1907 TO DATE) 1 REFERENCES IN FILE CAPLUS (1907 TO DATE) => fil caplus COST IN U.S. DOLLARS

FULL ESTIMATED COST

SINCE FILE TOTAL ENTRY SESSION 58.65 134.68

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http://www.cas.org/infopolicy.html

L18 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2007 ACS ON STN ACCESSION NUMBER: 2004:544228 CAPLUS DOCUMENT NUMBER: 142:197081

DOCUMENT NUMBER: TITLE:

Preparation of calcium ascorbate by mechanochemical

AUTHOR (S):

Preparation of calcium ascorpate by meaning synthesis
Du, Baoan: Du, Yanjun: Wang, Lijuan: Wang, Maosheng: Gao, Ruiying: Dong, Lixin
College of Chemical + Environmental Science, Hebei
University, Baoding, 071002, Peop. Rep. China
Shipin Gongye Keji (2002), 23(12), 18-39
CODEN: SCOKE6: ISSN: 1002-0306
Shipin Gongye Keji Bianjibu
Journal CORPORATE SOURCE:

SOURCE:

PUBLISHER:

DOCUMENT TYPE: Journal Chinese LANGUAGE:

Ca ascorbate was prepared by mechanochem. synthesis method from ascorbic acid and active Ca. The reaction process was modified by IR. All

indexes
of the product met the standard of the GB15809-1995 and USP(1995).

with other methods, the costs of production and equipment investment

were very low, the period of production was very short, and the quality of the

uct
was excellent. This technol. was suitable for industrial production
50-81-7, Ascorbic acid, biological studies
RL: FFD (Food or feed use); RCT (Reactant); BIOL (Biological study); RACT
(Reactant or reagent); USES (Uses)
(preparation of calcium ascorbate by mechanochem. synthesis ascorbic

acid

and active calcium)
50-81-7 CAPLUS
L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

5743-27-1P, Calcium ascorbate RL: FFD (Food or feed use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of calcium ascorbate by mechanochem. synthesis ascorbic

and active calcium)
573-27-1 CAPLUS
L-Ascorbic acid, calcium salt (2:1) (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

L18 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2007 ACS ON STN
ACCESSION NUMBER: 2002:157178 CAPLUS
TITLE: 136:199024
Microbial production of L-ascorbic acid and
D-erythorbic acid
Asakura, Akira: Hoshino, Tatsuo; Shinjoh, Masako
Roche Vitamins Ag, Switz.
SOURCE: EU. Pat. Appl., 19 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent

Patent English

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

PAT	TENT	NO.			KIN	D	DATE	:	Į	LPP.	LICA:	rion	NO.		D	ATE	
						-									-		
EΡ	1182	262			A1		2002	0227	· E	P	2001-	-1195	85		2	0010	816
	R:	AT,	BE,	CH,	DE,	DK,	ES,	FR,	GB,	GR	, IT,	LI,	LU,	NL,	SE,	MC,	PT,
		IE,	SI,	LT,	LV,	FI,	RO										
ΙN	1932	03			A1		2004	0717	1	N	2001-	-MA68	7		2	0010	820
ΑU	7812	77			B2		2005	0512	,	U :	2001-	-6354	4		2	0010	820
CA	2355	298			Al		2002	0223		:A :	2001-	-2355	298		2	0010	821
NO	2001	0040	82		A		2002	0225		ю:	2001-	-4082			2	0010	822
JΡ	2002	1018	95		A		2002	0409	٥	IP :	2001-	-2533	35		21	0010	823
BR	2001	0036	39		А		2002	0416	E	R :	2001-	-3639			21	0010	823
CN	1351	171			А		2002	0529		N :	2001-	-1257	28		21	0010	823
US	2003	1051	60		A1		2003	0605	ι	s :	2001-	-9380	35		21	0010	823
US	6777	212			B2		2004	0817									

A process for producing L-ascorbic acid or D-erythorbic acid or in each case its sodium, potassium or calcium salt, from 2-keto-L-gulonic acid or 2-keto-D-gluconic acid or in each case its sodium, potassium or calcium salt, involves incubating 2-keto-L-gulonic acid or 2-keto-D-gluconic

EP 2000-118059

A 20000823

each as the free acid or as its sodium, potassium or calcium salt, and cells of a thermoacidophilic microorganism at temps. from about 30°C to about 100°C and at a pH from about 1 to about 6 in a solution to form L-ascorbic acid or D-erythorbic acid or an appropriate

salt

salt

thereof, and isolating said product from the solution L-Ascorbic acid
(vitamin C) is widely used not only in health care as such but also in
food, animal feed, e.g. fish feed, and cosmetics. D-Erythorbic acid is
mainly used as an antioxidant for food additives.

IT 50-81-7p, L-Ascorbic acid, preparation 5743-27-1p,
Calcium ascorbate
RL: BMF (Bloindustrial manufacture); BIOL (Biological study); PREP
(Preparation)
(production of L-ascorbic acid and D-erythorbic acid by
Alicyclobacillus
strains)
RN 50-81-7 CAPLUS
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

L18 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN

L18 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

5743-27-1 CAPLUS L-Ascorbic acid, calcium salt (2:1) (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L18 ANSWER 3 OF 10
ACCESSION NUMBER:
1999:201632 CAPLUS
131:68103
COLUMENT NUMBER:
1211:68103
COLORORATE SOURCE:
CORPORATE SOURCE:
SOURCE:
SOURCE:
SOURCE:
CORPORATE SOURCE:

PUBLISHER: Hebei Shifan Daxue Xuebao Bianjibu

DOCUMENT TYPE: LANGUAGE: Chinese

URGE: Chinese
Calcium L-ascorbate was synthesized with L-ascorbic acid and CaCO3. The antioxidn. of the compound on chicken and fish meat was examined Results shown that this compound can preserve protein denaturation through its antioxidn. 5743-27-1P, Calcium ascorbate

RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (calcium L-ascorbate synthesis and antioxidn.) 5743-27-1 copuls

5743-27-1 CAPLUS

L-Ascorbic acid, calcium salt (2:1) (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

●1/2 Ca

50-81-7, L-Ascorbic acid, reactions RL: RCT (Reactant): RACT (Reactant or reagent) (calcium L-ascorbate synthesis and antioxidn.) 50-81-7 CAPLUS L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

L18 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN (Continued) .

L18 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1997:41547 CAPLUS
TITLE: 126:60281 Process for preparing calcium ascorbate
INVENTOR(S): Kochetkova, Larisa I.; Chumakov, Sergej I.; Ionin,
Vladimir N.; Rudenko, Anna A.; Istomina, Lyudmila I.;
PATENT ASSIGNEE(S): Aktsionernoe Obshchestvo Otkrytogo Tipa
"belgorodvitaminy", Russia
SOURCE: RUSS. From: Izobreteniya 1996, (9), 223-224.
CODEN: RUXXE7
DOCUMENT TYPE:

DOCUMENT TYPE: LANGUAGE: Patent Russian

FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

APPLICATION NO. DATE PATENT NO. KIND DATE RU 2057128 PRIORITY APPLN. INFO.: RU 1992-5040908 SU 1992-5040908 19960327 C1

OTHER SOURCE(S): CASREACT 126:60281

Title only translated.
5743-27-1P, Calcium ascorbate
RL: INF (Industrial manufacture); SPN (Synthetic preparation); PREP

(preparation of calcium ascorbate) 5743-27-1 CAPLUS

5743-27-1 CAPLUS L-Ascorbic acid, calcium salt (2:1) (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry

●1/2 Ca

50-81-7, Ascorbic acid, reactions RL: RCT (Reactant): RACT (Reactant or reagent) (preparation of calcium ascorbate) 50-81-7 CAPLUS L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

L18 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:
DOCUMENT NUMBER:
124:422304
TITLE:
PATENT ASSIGNEE(S):
PATENT ASSIGNEE(S):
2000 CAPLUS COPYRIGHT 2007 ACS on STN
124:4242304
Preparation of calcium assorbates the companies of the companies o 124:242304
Preparation of calcium ascorbate from ascorbic acid
Wen, Sujie: Huo, Yulan: Wu, Hongbin
Zhongnan New Technology Inst., P.L.A., Peop. Rep.

Cnina
Faming Zhuanli Shenqing Gongkai Shuomingshu, 10 pp.
CODEN: CNXXEV SOURCE:

DOCUMENT TYPE: Patent LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1107845	A	19950906	CN 1994-100392	19940113
CN 1044706	В	19990818		
PRIORITY APPLN. INFO.:			CN 1994-100392	19940113

Calcium ascorbate for medical use is prepared from ascorbic acid by dissolving ascorbic acid in hot water, treating with calcium phosphate ${\bf r}$ AB

then with lime milk to pH 4.5-7, filtering under reduced pressure,

then with lime milk to pH 4.5-7, filtering under reduced pressure, concentrating
the liquid phase, crystallizing, centrifuging to sep. the crystals, washing with
ethanol, and drying at 50-60° under reduced pressure or at regular pressure. The yield was 94-98.51 and purity ≥98.51.
IT 50-81-7, Ascorbic acid, reactions
RL: RCT (Reactant): RACT (Reactant or reagent)
(preparation of calcium ascorbate from ascorbic acid)
RN 50-81-7 CAPLUS
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

IT 5743-27-1P, Calcium ascorbate 5743-27-1P, Calcium ascorbate
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of calcium ascorbate from ascorbic acid)
5743-27-1 CAPLUS
L-Ascorbic acid, calcium salt (2:1) (SCI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

●1/2 Ca

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L18 ANSWER 7 OF 10
ACCESSION NUMBER:
DOCUMENT NUMBER:
1988:43899 CAPLUS
1988:43890 CAPLUS
1988:43899 CAPLUS
1988:4389 CA
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Chinese
AB Ca ascorbate (I) was prepared by reaction of ascorbic acid (II) with CaCO3.

The stability of I was better than II in a storage test at room

Absolute stereochemistry.

5743-27-1P, Calcium ascorbate RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and stability and antioxidant property of)
5743-27-1 CAPLUS
L-Ascorbic acid, calcium salt (2:1) (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

●1/2 Ca

L18 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2007 ACS ON STN ACCESSION NUMBER: 1991:134809 CAPLUS DOCUMENT NUMBER: 114:134809

TITLE: AUTHOR(5):

114:134809
Mechanosynthesis of ascorbic acid salts
Chuev, V. P.; Belova, V. M.; Ivanov, E. Yu.
IKhTTIMS, Belgorod, USSR
Mekhanokhim. Sint., Dokl. Vses. Nauchno-Tekh. Konf.
(1990), 172-5. Editor(s): Butyagin, P. Yu. Izd.
Dal'nevost. Univ.: Vladivostok, USSR.
CODEN: 587JAG
Conference
Russian CORPORATE SOURCE: SOURCE:

DOCUMENT TYPE:

MAGE: Conterence
WAGE: Russian
Mechanochem. activation of ascorbic acid (HL) with MHCO3 (M = Na, K), MOH,

M2CO3, Ca(OH)2, and CaO gave ML and CaL2. Ca(OH)2 and CaO required the presence of H2O for reaction. CaCO3, FeO, and Fe(OH)2 did not react. 50-81-7, Ascorbic acid, reactions RL: RCT (Reactant); RACT (Reactant) or reagent) (mechanochem. reaction of, with calcium and potassium and sodium

salts)

salts)
RN 50-81-7 CAPLUS
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

5743-27-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, by mechanochem. reaction of ascorbic acid with salts)
5743-27-1 CAPLUS
L-Ascorbic acid, calcium salt (2:1) (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

●1/2 Ca

L18 ANSWER 8 OF 10
ACCESSION NUMBER:
D00CUMENT NUMBER:
108:26949
TITLE:
Fluorocarbon blood substitutes
Long, David M., Jr. Fluorocarbon blood substitutes

Long, David M., Jr. USA

PATENT ASSIGNEE(S): SOURCE: EUR. Pat. Appl., 10 pp. CODEN: EPXXDW Patent

DOCUMENT TYPE:

English 7

LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

PA'	TENT NO.			KIND				PLICATION NO		
EP	231070			A2		19870805	EP	1987-300248		
EP	231070 231070			A3		19870923				
EP	231070			В1		19980610				
	R: AT,	BE,	CH,	DE,	ES,	FR, GB,	IT, L	I, LU, NL, S 1986-818690 1987-130	E	
us	4865836			A		19890912	US	1986-818690		19860114
NO	8700130			A		19870715	NO	1987-130		19870113
NO	173214			В		19930809				
NO	173214			С		19931117				
						130,0,10	AU	1987-67516		19870113
AU	599068			B2		19900712				
AT	167054			T		19980615	AT	1987-300248 1987-300248 1987-252 1987-5201		19870113
ES	2120400			тз		19981101	ES	1987-300248		19870113
ZA	8700252			A		19871125	Z.A	1987-252		19870114
J₽	01139526			A		19890601	JP	1987-5201		19870114
CA	1279011			С		19910115	CA	1987-527330 1989-US2948		19870114
Wo	9100090			Al		19910110	WO	1989-US2948		19890705
	₩: AU,	JP								
	RW: AT,	BE,	CH,	DE,	FR,	GB, IT,	LU, N	L, SE 1989-39649 1989-604769 1989-387947 1993-100664		
AU	8939649			A		19910117	AU	1989-39649		19890705
CA	1338854			С		19970121	CA	1989-604769		19890705
US	5080885			А		19920114	US	1989-387947		19890824
US	5393513			А		19950228	US	1993-100664		19930730
PRIORIT	APPLN.	INFO.	:				US	1986-818690	A	19860114
							EP	1987-300248		19870113
							WO	1989-US2948	A	19890705
							US	1989-387947	Al	19890824
							US	1991-811026	81	19911219

Perfluorocarbon emulsion blood substitutes contain an aqueous phase and a brominated perfluorocarbon-based monaq, phase that contains an emulsifier and a biocompatible amount of a compound chosen from cholesterol, tocopherol.

nerol, and/or a steroid hormone. After heat sterilization, 95% of the

siried
bromoperfluorocarbon exists (as the non-frozen emulsion) as particle size
<400 nm with mean diameter <150 nm. after 1 mo. A perfluorocarbon

emulsion
was prepared, containing perfluorocctyl bromide 100, lecithin 9.1,
6a-fluoro-16a-methylprednisolone 0.02, a-tocopherol 0.2,
glycerol 1.0, Na diphosphate 0.012, and Na phosphate 0.057%
(Weight/Volume

ratio), in a micromixer at 15 cycles of separation and redirection of flows at

L18 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
>1500 ft/s. The particle size distribution showed 2 peaks at 84.2-87.2
(major) and 200.0-252.6 nm which did not change after sterilization at 90° for 15 min.

IT 50-81-7p, Ascorbic acid, biological studies 5743-27-1P,
Calcium ascorbate
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(blood substitutes containing, bromoperfluorocarbon emulsion-based, preparation
and stabilization of)
RN 50-81-7 CAPLUS
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

5743-27-1 CAPLUS L-Ascorbic acid, calcium salt (2:1) (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

●1/2 Ca

L18 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

●1/2 Ca

L18 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2007 ACS ON STN ACCESSION NUMBER: 1985:154796 CAPLUS DOCUMENT NUMBER: 102:154796

DOCUMENT NUMBER: TITLE: 102:154796
Physiologically active preparation for decreasing the plasma cholesterol level Kubec, Frantisek; Ginter, Emil Czech.
Czech., 6 pp. CODEN: CZXXA9
Patent Czech 1

INVENTOR(S): PATENT ASSIGNEE(S): SOURCE:

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE CS 212525 PRIORITY APPLN. INFO.: 81 19820326 CS 1979-4794 CS 1979-4794 19790709

Anticholesteremic compns. were formulated containing ascorbic acid [50-81-7] or its salts, a fibrous nondigestible component, preservative, stabilizer, and flavorant. They are also useful for the treatment of gastrointestinal disorders. Thus, a powdered mixture of Ca ascorbate [5743-27-1] 3.63, guar polymer 90, Na benzoate 0.1, and orange flavor 1 was granulated with an aqueous 50% solution containing glucose parts. 50-81-7P, preparation 5743-27-1P RL: PREP (Preparation) (anticholesteremic pharmaceuticals containing) 50-81-7 CAPLUS L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

5743-27-1 CAPLUS L-Ascorbic acid, calcium salt (2:1) (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry

L18 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1981:425535 CAPLUS
DOCUMENT NUMBER: 595:25535
TITLE: Solid crystalline composition consisting essentially of calcium ascorbate
INVENTOR(S): Schreur, Clarence

USA
U.S., 4 pp. Cont.-in-part of U.S. Ser. No. 595,234, abandoned. PATENT ASSIGNEE(S): SOURCE:

CODEN: USXXAM Patent

DOCUMENT TYPE:

English

LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
			DALD	ALIBICATION NO.	
	US 4251449	A	19810217	US 1979-9480	19790205
	CA 1137095	Al	19821207	CA 1980-359203	19800828
	FR 2497804	A1	19820716	FR 1981-553	19810114
	DE 3100955	A1	19820805	DE 1981-3100955	19810114
	GB 2091267	A	19820728	GB 1981-1168	19810115
	BE 887130	A1	19810514	BE 1981-203524	19810119
	NL 8100297	A	19820816	NL 1981-297	19810122
т,	STEEL PROTEIN THES.			HE 1075-505224	** 10750711

AB Ascorbic acid was treated with CaCO3 in aqueous medium at \$70°, under controlled conditions so that the reaction mixture was maintained saturated with CO2(g) and CO2 foam blanket was maintained over the reaction mixture to give a syrupy product, which spontaneously crystallized to give solid crystalline mass consisting essentially of Ca ascorbate.

solid
crystalline mass consisting essentially of Ca ascorbate.
5743-27-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, from ascorbic acid and calcium carbonate)
5743-27-1 CAPLUS
L-Ascorbic acid, calcium salt (2:1) (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

●1/2 Ca

50-81-7, reactions RL: RCT (Reactant): RACT (Reactant or reagent) (reaction of, with calcium carbonate) 50-81-7 CAPLUS L-Ascorbic acid (SCI, 9CI) (CA INDEX NAME)

L18 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN (Continued Absolute stereochemistry.

=> d his

	(FILE 'HOME' ENTERED AT 12:13:27 ON 05 MAR 2007)
L1	FILE 'CAPLUS' ENTERED AT 12:16:03 ON 05 MAR 2007 1 S US20050222438/PN SELECT L1 1 RN
L2 L3	FILE 'CAPLUS' ENTERED AT 12:16:28 ON 05 MAR 2007 252653 S E1-E7 2448 S 134-03-2/RN
L4	FILE 'REGISTRY' ENTERED AT 12:17:43 ON 05 MAR 200' 7 S E1-E7
L5 L6 L7 L8 L9 L10	FILE 'CAPLUS' ENTERED AT 12:19:16 ON 05 MAR 2007 81335 S 50-81-7/RN 6231 S L5 AND CALCIUM 234 S L6 AND CALCIUM ASCORBATE 0 S L7 AND NITROGEN DIOXIDE 0 S L7 AND NITRIC OXIDE 181 S L7 AND ASCORBIC ACID
L11 L12	FILE 'REGISTRY' ENTERED AT 12:21:11 ON 05 MAR 2007 1 S 50-81-7 1 S 89-65-6
•	FILE 'CAPLUS' ENTERED AT 12:21:30 ON 05 MAR 2007
L13 L14 L15 L16	FILE 'REGISTRY' ENTERED AT 12:21:40 ON 05 MAR 2007 2 S CALCIUM ASCORBATE 1 S CALCIUM ISOASCORBATE 0 S CALCIUM ASCORBIC ACID 1 S CALCIUM ISOASCORBIC ACID
L17 L18 L19	FILE 'CAPLUS' ENTERED AT 12:23:12 ON 05 MAR 2007 15 S L13/P 10 S L17 AND 50-81-7/RN 1 S L14/P
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=> d ibib abs hitstr 119

L19 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:157178 CAPLUS
TITLE: 136:199024 Microbial production of L-ascorbic acid and D-erythorbic acid

INVENTOR(S): Asakura, Akira: Hoshino, Tatsuo: Shinjoh, Masako
Roche Vitamins Ag, Switz.
Eur. Pat. Appl., 19 pp.
CODEN: EPXXDW
PATENT INFORMATION:
FAMILY ACC. NUM. COUNT: 1
FAMILY ACC. NUM

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1182262	A1	20020227	EP 2001-119585	20010816
R: AT, BE, CH,	DE, DK,	ES, FR, G	B, GR, IT, LI, LU, NL,	SE, MC, PT,
IE, SI, LT,	LV, FI,	RO		
IN 193203	A1	20040717	IN 2001-MA687	20010820
AU 781277	B2 .	20050512	AU 2001-63544	20010820
CA 2355298	Al .	20020223	CA 2001-2355298	20010821
NO 2001004082	A.	20020225	NO 2001-4082	20010822
JP 2002101895	A.	20020409	JP 2001-253335	20010823
BR 2001003639	A.	20020416	BR 2001-3639	20010823
CN 1351171	A	20020529	CN 2001-125728	20010823
US 2003105160	A1	20030605	US 2001-938035	20010823
US 6777212	B2	20040817		
PRIORITY APPLN. INFO.:			EP 2000-118059 A	20000823

A process for producing L-ascorbic acid or D-erythorbic acid or in each case its sodium, potassium or calcium salt, from 2-keto-L-gulonic acid or 2-keto-D-gluconic acid or in each case its sodium, potassium or calcium salt, involves incubating 2-keto-L-gulonic acid or 2-keto-D-gluconic AB

acid.

each as the free acid or as its sodium, potassium or calcium salt, and cells of a thermoacidophilic microorganism at temps. from about 30°C to about 10°C and at a pH from about 1 to about 6 in a solution to form L-ascorbic acid or D-erythorbic acid or an appropriate

salt

thereof, and isolating said product from the solution L-Ascorbic acid (vitamin C) is widely used not only in health care as such but also in food, animal feed, e.g. fish feed, and cosmetics. D-Erythorbic acid is mainly used as an antioxidant for food additives. 99552-34-8P

IT 99552-34-BP
RL: BMF (Bioindustrial manufacture); BIOL (Biological study); PREP (Preparation)
(production of L-ascorbic acid and D-erythorbic acid by Alicyclobacillus strains)
RN 99552-34-B CAPLUS
CN D-erythro-Hex-2-enonic acid, y-lactone, calcium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L19 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN

REFERENCE COUNT:

THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

=> log y COST IN U.S. DOLLARS SINCE FILE TOTAL ENTRY SESSION FULL ESTIMATED COST

63.40 198.08

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) SINCE FILE TOTAL ENTRY SESSION

CA SUBSCRIBER PRICE -8.58 -8.58

STN INTERNATIONAL LOGOFF AT 12:24:43 ON 05 MAR 2007